



LESOTHO AVAILABILITY AND UTILIZATION OF CEREALS 2011/2012



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Mission: To coordinate the National Statistical System (NSS) and produce accurate, timely and reliable culturally relevant and internationally comparable statistical data for evidence-based planning, decision making, research, policy, program formulation and monitoring and evaluation to satisfy the needs of users and producers.

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1.0 Introduction

The word cereals comes from a Greek word called Ceres which belongs to grass family called Graminea. Cereals have been the staple human diet or food from historic time because of their wide cultivation, good keeping qualities and blend flavour. The three common cereals in Lesotho are Maize, Sorghum and Wheat which are well adapted to semi-arid region and very important for food security.

1.1 Background

The Bureau of Statistics (BOS) is mandated with the responsibility of collecting, processing, analyzing and disseminating statistical information. BOS conducts Annual Agricultural Production Survey (APS), which provides agricultural statistics for agricultural variables that are subject to frequent and seasonal changes.

The government of Lesotho has made efforts to sustain and improve agriculture in the country, among others, block farming and farmers associations were introduced. Main emphasis has been on areas of crop production, livestock production and agro-based industries.

Availability and Utilization of Cereals Report concentrates on activities that contribute to the supply and demand of food in the Marketing Year, which commences on the 1st of April to the 31st of March. This report covers the information on Maize, Sorghum and Wheat, where the main focus is on availability within households, their utilization, and total food consumption, consumption per week as well as expected food consumption. Thus, showing the overall cereal surplus and deficit within farming households, this is obtained from expected consumption and forecasted production of mentioned cereals.

1.2 Objective

Government and other data users need reliable statistics concerning the agricultural resources in the country, thus presenting status of their utilization and potentialities for effective government economic policy decision and formulation of sound and realistic development programs. The information is also needed by international organizations, particularly those that are contributing to various development projects in agriculture as well as operators of private businesses and farmers.

The main objective of Availability and Utilization of Cereals Report is to provide basis for formulating and executing timely food security measures, to alert policy-makers about food situation that contribute to food national balance sheet within. This is done to permit timely and orderly planning of cereal imports in cases of shortage and exports in cases of surplus.

1.3 Survey Design and Sample Selection

A stratified multi-stage sampling scheme was adopted for the selection of the sample for 2010/2012 Agricultural Year. Two or more enumeration areas were combined to constitute Primary Sampling Units (PSUs) and agricultural households (farming households) constitute Secondary Sampling Units (SSUs). Agricultural Production Survey (APS) covered 120 PSUs in rural areas where each PSU covered an average of about 20 selected households through systematic sampling. The PSUs have been selected with Probability Proportional to Size (PPS), the size estimate being obtained from the 2006 Population and Housing Census. The agricultural holdings are stratified to those that meet one or more of the following conditions:

- (i) Operating at least one field
- (ii) Rearing one or more cattle
- (iii) Rearing one or more goats and/ or sheep
- (iv) Fifty improved chicken
- (v) One improved pig

1.4 Data Collection

Data collection on availability and utilization of cereals in the households was obtained through face-to-face interviews with the selected farming households from the selected PSUs on the 1st of April. Hence the accuracy and quality of data is dependent on honesty and discretion of the respondent.

2.0 Findings

Total availability is the quantity of cereals available in the households for use in a Marketing Year. Total utilization refers to the quantity of cereals used by households inclusive of the stock available in a Marketing Year. Total production in this case refers to the production of cereal within the households.

2.1 Availability of Cereals

Availability of cereals include; previous stock attained in the past Agricultural Year, production of the current year, cereals purchased by the households and those received as gifts and incoming exchange of cereals with other commodities.

Figure 1 demonstrates total availability of cereals in metric tonnes (mt) by district. It is shown from the figure that Mohale's Hoek recorded the highest quantity of available maize (9,896mt) followed by Leribe with 9,367mt while Quthing had the lowest (2,300mt). Mokhotlong dominated with 1,905 mt of wheat followed by Thaba-Tseka with 1,655 mt and the least was observed in Mafeteng with 83mt. Considering total availability of sorghum, Maseru had the highest quantity with 1,411mt and the lowest was observed in Qacha's Nek with 228 mt.

Figure1: Total Available Cereals ('00) by District, 2011/2012 Marketing Year

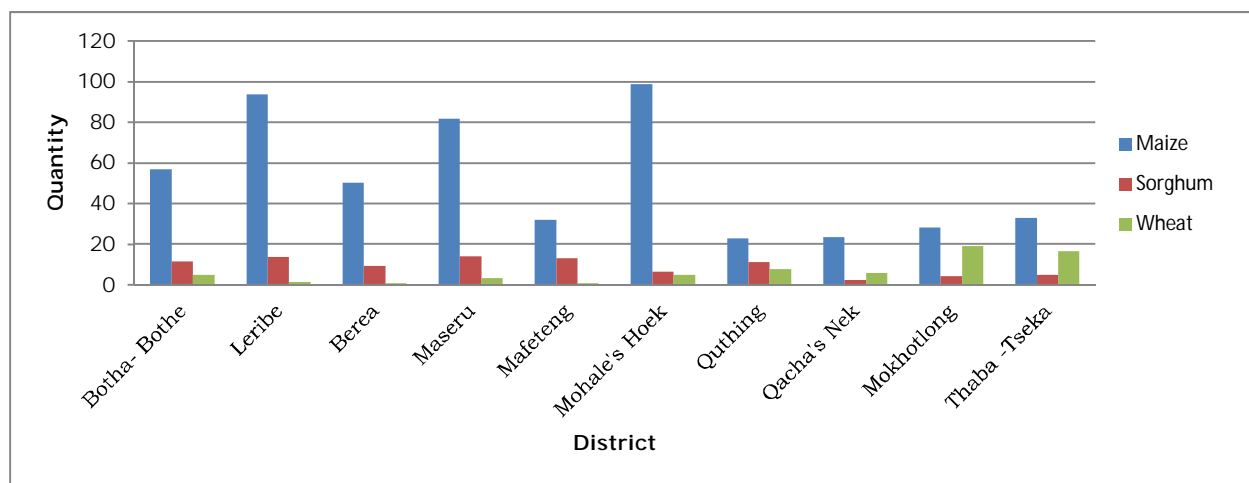


Table 1 presents three major cereals available at household in 2010/2011 and 2011/2012 Marketing Year. Production seemed had the highest contribution on availability of all cereals. Out of the total available maize, Production contributed 53.1 percent in 2011/2012 showing a decrease of 23.9 percent from the previous year. The same pattern was observed for sorghum. Wheat production has increased by 241.7 percent from 2010/2011 to 2011/2012 Marketing Year.

Table 1: Percentage Distribution of Available Cereals in 2010/2011 and 2011/2012 Marketing Year.

	Maize		Sorghum		Wheat	
	2010/2011	2011/2012	2010/2011	2011/2012	2010/2011	2011/2012
Previous Stock	20.3	21.4	20	33.1	72	20.7
Production	69.8	53.1	69.6	55.4	20.4	69.5
Purchases	5.6	22.3	4.1	5.3	3.3	4.7
Received as gift	2.7	2.1	3	3.3	1.6	2.8
Incoming Exchange with other commodities	1.5	1.1	3.2	2.9	2.8	2.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

2.2 Utilization of Cereals

Utilization of cereals include; sales of cereals and those given to friends or relatives, outgoing exchange of cereals with other commodities, other uses of cereals (seeds, feeds) and current stock available at the date of interview.

Figure 2 illustrates total cereals utilized by district during 2011/2012 Marketing Year. Leribe dominated other districts with a record of 1,548mt of maize utilized followed by Maseru with 1,527mt while Thaba-Tseka had the least with 484mt. Mokhotlong recorded the largest quantity of wheat utilized (650mt) followed by Thaba-Tseka with 361mt. It is further revealed from the figure that sorghum was most utilized in Leribe with 384mt and Thaba-Tseka was the least with 52mt.

Figure 2: Utilization of Cereals (mt) by District, 2011/2012 Marketing Years

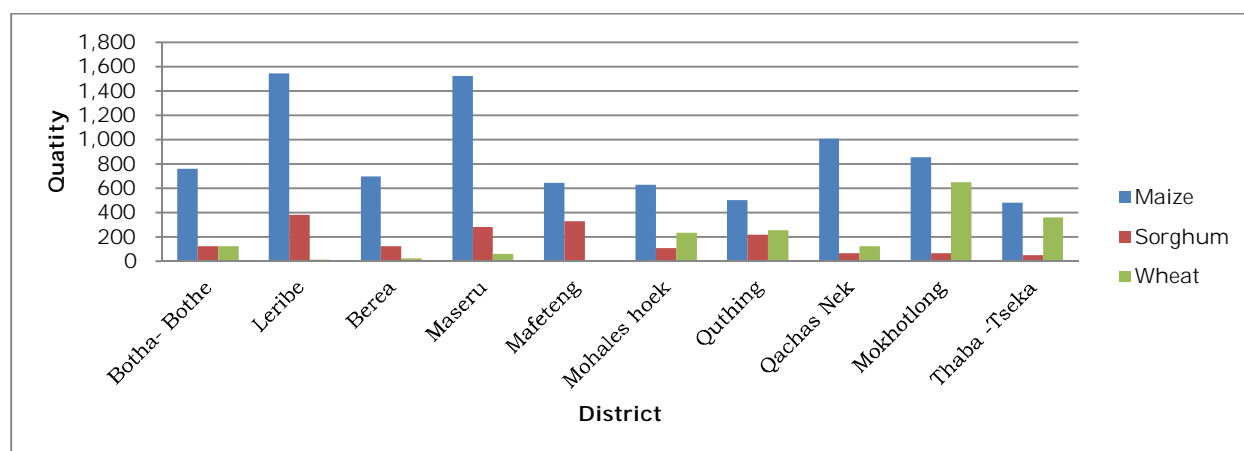


Figure 3 shows total utilization of cereals from 2009/2010 to 2010/2011 Marketing Years. The utilization of maize increased by 24.2 percent from 18,722mt in 2009/2010 to 23,263mt in 2010/2011 Marketing Year and then decreased by 63.8 percent in 2011/2012 Marketing Year. The same pattern was observed for sorghum.

Figure 3: Utilization of Cereals (00' mt) from 2009/2010 to 2011/2012 Marketing Year

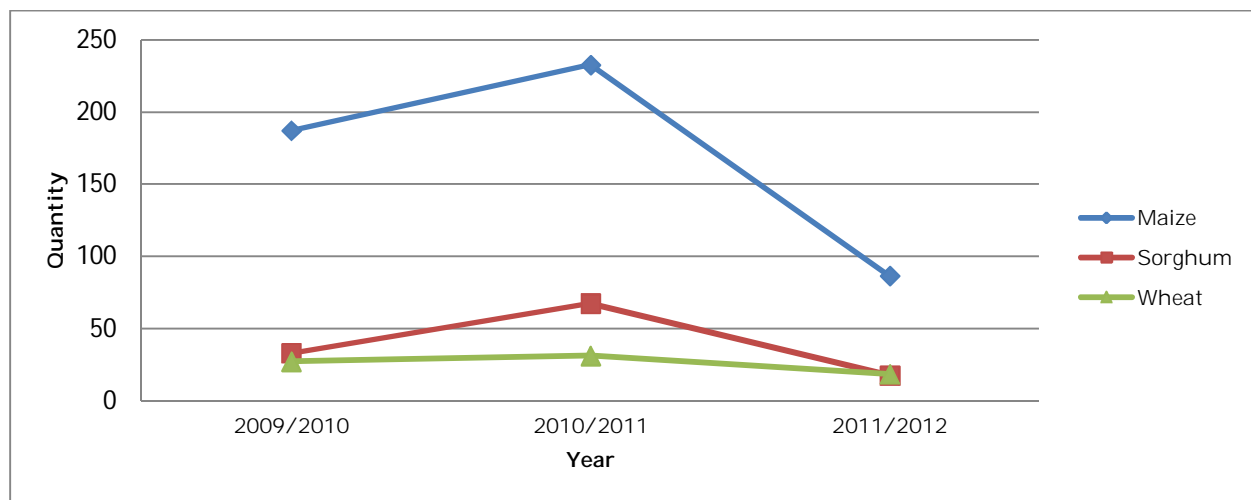


Table 2 presents percentage distribution of total utilization of maize during. It is observed that “other uses” such as feeds and seeds contributed the highest in the utilization of maize and wheat with 32.0 and 52.5 percent respectively, while sales of sorghum cereals contributed 42.percent.

Table 2: Percentage Distribution of Maize Utilization, 2010/2011 Marketing Year

	Maize	Sorghum	Wheat
Sold	19.7	42.4	3.8
Given to friends or family	21.7	19.4	5.5
Outgoing exchange	5.2	7.3	8.8
Other uses(feeds and seed)	32.0	14.3	52.5
Closing Stock	21.4	16.7	29.5
Total	100.0	100.0	100.0

3.0 Surplus and Deficit of Cereals

Table 3 shows the expected consumption, forecasted production and surplus/deficit of maize by district. Generally, in 2010/2011 production of maize was estimated at 51,506mt showing a decrease of 67.4 percent to 16,788mt of 2011/2012 Marketing Year. The expected consumption decreased by 30.9 percent from 61,723mt in 2010/2011 to 42,632mt in 2011/2012 Marketing Year. The shortage of maize was observed in both years even though there was an increase of 152.9 percent.

It is observed that Maseru dominated with 4,679mt of forecasted production in 2011/2012. The expected consumption was highest in Maseru's Hoek with 9,089mt and the deficit of 8,406mt in 2011/2012 Marketing Year.

Table 3: Expected Maize Consumption, Forecasted Production and Surplus/Deficit by District, for 2010/2011 and 2011/2012 Marketing Years

District	Forecasted Production(mt)		Expected Consumption(mt)		Surplus/Deficit(mt)	
	2010/2011	2011/2012	2010/2011	2011/2012	2010/2011	2011/2012
Botha -Bothe	2,815	1,826	5,113	4,845	- 2,298	-3,019
Leribe	10,467	561	12,578	7,668	-2,111	-7107
Berea	3,446	386	9,415	4,242	-5,969	-3,856
Maseru	8,740	4,679	10,709	6,524	-1,969	1,845
Mafeteng	10,489	862	7,318	2,495	3,170	-1,633
Mohale's Hoek	7,300	683	3,800	9,089	3,500	-8,406
Quthing	1,446	1,151	2,014	1,763	-568	612
Qacha's Nek	821	48	2,133	1,329	-1,312	-1,281
Mokhotlong	3,110	4,294	3,657	1,918	-546	2,376
Thaba -Tseka	2,873	2,298	4,987	2,757	-2,114	459
Lesotho	51,506	16,788	61,723	42,632	-10,217	-25,844

Table 4 illustrates expected consumption, forecasted production and surplus/deficit of sorghum by district for 2010/2011 and 2011/2012 Marketing Years. The overall forecasted production of sorghum decreased by 60.7 percent from 4,838mt in 2010/2011 to 1,901mt in 2011/2012 Marketing Year. Expected consumption also decreased by 55.2 percent from 16,079mt of the previous year to 7,202mt of the current year while deficit decreased by 52.8 percent from 11,241mt of the previous year to 5,300mt of the current year. Table 4 further illustrates that Botha-Bothe had the highest sorghum production (671mt) in 2011/2012 with 1,011mt as the expected consumption resulting in deficit of 300mt. The highest sorghum consumption was

expected in Maseru with 1,109mt. The highest shortage of sorghum was observed in Mohale's Hoek with 863mt.

Table 4: Expected Sorghum Consumption, Forecasted Production and Surplus/Deficit by District, 2010/2011 and 2011/2012 Marketing Years.

District	Forecasted Production (mt)		Expected consumption(mt)		Surplus/Deficit (mt)	
	2010/2011	2011/2012	2010/2011	2011/2012	2010/2011	2011/2012
Botha- Bothe	241	671	1,317	1,011	-1,076	-300
Leribe	887	132	3,360	971	-2,473	-658
Berea	1,085	106	2,895	790	-1,810	-684
Maseru	783	204	2,482	1,109	-1,699	-753
Mafeteng	762	182	1,903	957	-1,141	-346
Mohale's Hoek	441	32	1,098	528	-657	-863
Quthing	233	78	1,033	895	-800	-78
Qacha's Nek	60	6	807	156	-746	-346
Mokhotlong	77	373	227	352	-150	-62
Thaba-Tseka	270	116	958	435	-689	-319
Lesotho	4,838	1,901	16,079	7,202	-11,241	-5,300

Table 5 illustrates expected, forecasted production consumption and surplus/deficit of wheat by district in 2010/2011 and 2011/2012 Marketing Years. Wheat seemed to be performing well as compared to other cereals, it recorded the surplus of 9,306mt and 5,842mt in 2010/2011 and 2011/2012 respectively. Mokhotlong dominates all districts with wheat production, expected consumption and surplus in both Marketing Years.

Table 5: Expected Consumption, Forecasted Production and Surplus/Deficit of Wheat by District, 2010/2011 and 2011/2012 Marketing Years.

District	Forecasted Production (mt)		Expected consumption(mt)		Surplus/Deficit(mt)	
	2010/2011	2011/2012	2010/2011	2011/2012	2010/2011	2011/2012
Botha- Bothe	21	1,168	271	373	-250	795
Leribe	284	293	423	135	-139	158
Berea	0	0	297	69	-297	-69
Maseru	1,308	1,074	725	283	583	791
Mafeteng	0	0	62	74	-62	-74
Mohale's Hoek	1,043	1,121	633	266	410	855
Quthing	498	983	452	509	46	474
Qacha's Nek	352	117	461	466	-109	-349
Mokhotlong	11,728	3,914	2,873	1,231	8,855	2,683
Thaba-Tseka	1,067	1,846	800	1,269	267	577
Lesotho	16,302	10,516	6,996	4,674	9,306	5,842

4.0 Food Balance Sheet

Food balance sheets present a comprehensive pattern of a country's food supply during a specified reference period. It shows each primary commodity and a number of processed commodities potentially available for human consumption and the sources of supply and its utilization.

The total quantity of foodstuffs produced in a country is added to the total quantity imported and adjusted to any change in stocks that may have occurred since the beginning of the reference period thus gives the supply available during that period. On the utilization side a distinction is made between the quantities exported, fed to livestock, used for seed, processed for food use and non-food uses, lost during storage and transportation, and food supplies available for human consumption at the retail level, that is as the food leaves the retail shop or otherwise enters the household.

This section covers domestic availability, requirements and domestic shortfall or surplus of maize, wheat and sorghum together with their planned imports. Table 6 presents annual cereal balance sheet for the 2011/2012 Marketing Year. In general all of these three main cereals have a domestic requirement of 359,394mt yet the domestic availability is only 83,439mt. This leaves a domestic deficit or shortfall of 275,955mt of all cereals. Out of 275,955mt of cereal deficit, maize has contributed 78.2 percent of total cereal short fall. As a result planned imports are 309,327mt to cover total short fall.

Table 6: Annual Cereal Balance Sheet for the 2011/2012 Marketing Year

ANNUAL CEREAL BALANCE SHEET FOR THE 2011/2012 MARKETING YEAR				
Annual Balance sheet as at 31 st March				
Figures in (000)				
	Maize	Wheat	Sorghum	Total
1. Domestic Availability	36.258	44.787	2.450	83.495
1.1 Opening stock (01/April/2012)	19.470	34.271	0.549	54.290
Formal (Monitored)	17.614	33.976	0.000	51.590
On farm (monitored)	1.856	0.295	0.549	2.700
1.2 Gross Harvest	16.788	10.516	1.901	29.205
2. Gross Domestic Requirements	252.136	82.720	24.538	359.394
2.1 Human consumption	249.368	82.468	23.562	355.398
2.2 feed ,seeds, other uses	2.768	0.252	0.976	3.996
3. Domestic Short fall/Surplus	-215.88	-37.93	-22.088	-275.899
4. Total Planned Imports	142.621	166.706	0.000	309.327
4.1 Commercial Imports	142.621	166.706	0.000	309.327
4.2 Food Aid - Agency	0.000	0.000	0.000	0.000
4.3 Food Aid - Government	0.000	0.000	0.000	0.000
5. Imports Received	7.159	2.463	0.000	9.622
5.1 Commercial Imports Received	7.159	2.463	0.000	9.622
5.2 Food Aid Received - Agency	0.000	0.000	0.000	0.000
5.3 Food Aid- Government	0.000	0.000	0.000	0.000
6. Expected Imports	135.462	164.243	0.000	299.705
6.1 Commercial Imports Expected	135.462	164.243	0.000	299.705
6.2 Food Aid - Agency	0.000	0.000	0.000	0.000
6.3 Food Aid - Government	0.000	0.000	0.000	0.000
7. Uncovered Shortfall/import Gap	-73.257	128.773	-22.088	33.428
8. Current Stock Level on 30th April 2012	11.855	29.850	0.000	41.705

Source: Disaster Management Authority

ANNEX

Total Availability and Utilization of Cereals in 2010/2011 and 2011/2012 Marketing Year

	Maize		Sorghum		Wheat	
	2010/2011	2011/2012	2010/2011	2011/2012	2010/2011	2011/2012
Available	86,196	52,124	23,146	9,109	10,264	6,626
Utilization (other uses)	23,263	8,658	6,752	1,767	3,131	1,860
Consumed as food	62,933	43,466	16,395	7,342	7,133	4,766
Expected consumption	61,723	42,632	16,079	7,201	6,996	4,674
Forecast production	51,506	16,735	4,838	1,901	16,302	10,516
Deficit/ Surplus	-10,217	-25,844	-11,241	-5,300	9,306	5,842

Total Availability of Cereals by District, Zone 2011/2012 Marketing Year

District	Zone	Maize	Sorghum	Wheat
Botha Bothe	Lowlands	1,580	692	14
	Foothills	2,566	458	0
	Mountian	1,555	8	493
	Total	5,701	1,158	507
Leribe	Lowlands	7,504	1,130	84
	Foothills	1,006	185	6
	Mountian	857	59	65
	Total	9,367	1,374	154
Berea	Lowlands	3,672	731	94
	Foothills	1,349	200	0
	Total	5,022	930	94
Maseru	Lowlands	4,548	658	49
	Foothills	2,739	739	20
	Mountian	891	14	282
	Total	8,178	1,411	351
Mafeteng	Lowlands	2,320	837	73
	Foothills	869	471	10
	Total	3,189	1,308	83
Mohales hoek	Lowlands	876	127	15
	Foothills	3,852	79	0
	Mountian	1,080	126	477
	SRV	4,088	315	12
	Total	9,896	648	504
Outhing	Mountian	923	440	619
	SRV	1,377	692	153
	Total	2,300	1,132	773
Qachas Nek	Mountian	2,021	24	585
	SRV	345	204	15
	Total	2,366	228	599
Mokhotlong	Mountian	2,811	425	1,905
	Total	2,811	425	1,905
Thaba Tseka	Mountian	3,031	255	1,655
	SRV	263	241	1
	Total	3,294	495	1,655
Lesotho		52,125	9,109	6,626

Total Utilization of Cereals by District,Zone 2011/2012 Marketing Year

District	Zone	Maize	Sorghum	Wheat
Botha Bothe	Lowlands	257	92	0
	Foothills	266	35	0
	Mountian	239	0	126
	Total	761	128	126
Leribe	Lowlands	1,334	347	14
	Foothills	101	26	1
	Mountian	114	12	2
	Total	1,548	384	16
Berea	Lowlands	508	117	24
	Foothills	189	8	0
	Total	696	125	24
Maseru	Lowlands	810	149	1
	Foothills	598	133	0
	Mountian	119	0	61
	Total	1,527	282	62
Mafeteng	Lowlands	559	290	5
	Foothills	85	42	3
	Total	644	331	8
Mohales hoek	Lowlands	185	31	0
	Foothills	71	6	0
	Mountian	214	21	233
	SRV	159	51	0
	Total	629	109	233
Quthing	Mountian	198	80	195
	SRV	305	140	59
	Total	502	219	254
Qachas Nek	Mountian	881	2	124
	SRV	130	68	0
	Total	1,011	70	124
Mokhotlong	Mountian	855	67	650
	Total	855	67	650
Thaba Tseka	Mountian	452	24	361
	SRV	31	28	0
	Total	484	52	361
Lesotho		8,658	1,767	1,860

Total Food Consumed of Cereals by District,Zone 2011/2012 Marketing Year

District	Zone	Maize	Sorghum	Wheat
Botha Bothe	Lowlands	1,324	600	14
	Foothills	2,300	422	0
	Mountian	1,316	8	366
	Total	4,940	1,030	381
Leribe	Lowlands	6,170	783	70
	Foothills	905	159	5
	Mountian	743	48	63
	Total	7,819	990	138
Berea	Lowlands	3,165	614	70
	Foothills	1,161	191	0
	Total	4,325	805	70
Maseru	Lowlands	3,739	510	48
	Foothills	2,141	606	20
	Mountian	772	14	221
	Total	6,652	1,131	289
Mafeteng	Lowlands	1,761	547	68
	Foothills	784	429	7
	Total	2,544	976	75
Mohaes hoek	Lowlands	691	96	15
	Foothills	3,781	73	0
	Mountian	865	105	244
	SRV	3,929	264	12
	Total	9,267	538	271
Quthing	Mountian	726	361	424
	SRV	1,072	552	94
	Total	1,798	913	519
Qachas Nek	Mountian	1,140	22	460
	SRV	216	137	15
	Total	1,356	159	475
Mokhotlong	Mountian	1,956	358	1,255
	Total	1,956	358	1,255
Thaba Tseka	Mountian	2,579	230	1,293
	SRV	231	213	1
	Total	2,811	443	1,294
Lesotho		43,467	7,344	4,766

Total Expected Consumption of Cereals by District,Zone 2011/2012 Marketing Year

District	Zone	Maize	Sorghum	Wheat
Botha Bothe	Lowlands	1,298	589	14
	Foothills	2,256	414	0
	Mountian	1,291	8	359
	Total	4,845	1011	373
Leribe	Lowlands	6,052	768	69
	Foothills	888	156	5
	Mountian	729	47	62
	Total	7,668	971	135
Berea	Lowlands	3,104	602	69
	Foothills	1,138	188	0
	Total	4,242	790	69
Maseru	Lowlands	3,667	501	48
	Foothills	2,100	595	19
	Mountian	757	14	216
	Total	6,524	1109	283
Mafeteng	Lowlands	1,727	537	67
	Foothills	769	420	7
	Total	2,495	957	74
Mohales hoek	Lowlands	678	94	15
	Foothills	3,709	72	0
	Mountian	849	103	239
	SRV	3,853	259	12
	Total	9,089	528	266
Quthing	Mountian	712	354	416
	SRV	1,051	541	92
	Total	1,763	895	509
Qachas Nek	Mountian	1,118	22	452
	SRV	211	134	14
	Total	1,329	156	466
Mokhotlong	Mountian	1,918	352	1,231
	Total	1,918	352	1,231
Thaba Tseka	Mountian	2,530	226	1,268
	SRV	227	209	1
	Total	2,757	435	1,269
Lesotho		42,632	7,202	4,674

Production of cereals (as reported by Farmers) 2011/2012 Marketing Year

District	Zone	Maize	Sorghum	Wheat
Botha Bothe	Lowlands	759	310	8
	Foothills	935	178	0
	Mountian	438	0	290
	Total	2,131	488	299
Leribe	Lowlands	5,075	700	59
	Foothills	713	110	0
	Mountian	560	46	56
	Total	6,348	855	115
Berea	Lowlands	2,183	318	84
	Foothills	770	152	0
	Total	2,953	471	84
Maseru	Lowlands	3,016	429	18
	Foothills	2,116	631	16
	Mountian	586	0	217
	Total	5,718	1,060	251
Mafeteng	Lowlands	1,048	177	48
	Foothills	590	288	0
	Total	1,638	464	48
Mohales hoek	Lowlands	527	74	0
	Foothills	336	54	0
	Mountian	800	68	374
	SRV	480	193	0
	Total	2,144	389	374
Outhing	Mountian	639	285	408
	SRV	825	378	77
	Total	1,464	662	485
Qachas Nek	Mountian	1,385	0	349
	SRV	232	110	0
	Total	1,617	110	349
Mokhotlong	Mountian	1,944	251	1,363
	Total	1,944	251	1,363
Thaba Tseka	Mountian	1,522	100	1,242
	SRV	207	191	0
	Total	1,729	292	1,242
Lesotho		27,687	5,043	4,607